BY ORDER OF THE COMMANDER
FAIRCHILD AIR FORCE BASE

FAIRCHILD AIR FORCE BASE
INSTRUCTION 15-101

14 MAY 2014

Weather

WEATHER SUPPORT INSTRUCTION

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 15-1, *Air Force Weather Operations*, Air Force Strategic Plan on Weather Reengineering, Air Force Instruction (AFI) 10-206, *Operational Reporting*, AFI 10-229, *Responding to Severe Weather Events*, AFI 15-114, *Functional Resource and Weather Technical Performance Evaluation*, AFI 15-128, *Air Force Weather Roles and Responsibilities*, Air Mobility Command Instruction (AMCI) 15-101, *Weather Operations And Support.* AFI 10-2501, *Air Force Emergency Management Program Planning and Operations*, Air Force Manual (AFMAN) 15-111, *Surface Weather Observations*, AFMAN 15-124, *Meteorological Codes*, AFMAN 15-129V1, *Air and Space Weather Operations - Characterization*, AFMAN 15-129V2, *Air and Space Weather Operations - Exploitation*. It establishes responsibilities and weather support procedures. It also provides general information for weather services, including weather observations and forecasts, weather warnings, watches, and advisories; space weather data, information dissemination, and base-wide reciprocal support. It applies to units assigned to the 92nd Air Refueling Wing (ARW), subordinate units, and units assigned, attached, or supported by Fairchild Air Force Base (AFB). Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) AFI 33-322, *Records Management Program*, and disposed of in accordance with the Air Force Records Information System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of*

Publication; route AF Forms 847 from the field through the appropriate functional' s chain of command.

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed. This instruction is a revision of FAIRCHILD AFBI 15-101, dated 16 September 2011. It up updates the overall format to reflect the AMC/A3AW recommended format. It updates duty priorities in order to improve operational focus and to better align support requirements with the wing's operational requirements in **Chapter 1.** Instrument Refresher Course support requirements outlined in **Chapter 3** were removed**.** All watch, warning and advisory tables have been removed and replaced with the Resource Protection Data Page reference.

Chapter 1

CHARACTERIZATION UNIT (CU) & EXPLOITATION UNIT (EU) INTERACTIONS

1.1. General. The 25th Operational Weather Squadron (OWS), the 618th Air & Space Operations Center (Tanker Airlift Control Center) Weather Directorate, (618 AOC/XOW [TACC]/XOW), and the 92 Operations Support Squadron (OSS)/OSW are the official weather information agencies for Fairchild AFB, Washington. These agencies provide weather information in support of the 92 ARW, the 141 ARW, and subordinate units and units assigned, attached, or supported by Fairchild AFB. The 92 OSS/OSW is commonly referred to as the Weather Flight (WF) and is the focal point for all weather-related issues. This instruction will be reviewed and revised no greater than biennially or IAW with host/parent unit procedures if the time is less than biennially.

1.1.1. The 25 OWS is considered the characterization unit. Characterization encompasses the "collect, analyze and predict" weather core competencies. Characterization depends on Air Force Weather's ability to collect accurate data, correctly analyze that data, and use the results to produce a coherent picture of the present and future state of the air and space environment.

1.1.2. 92 OSS/OSW and 618 AOC/XOW are considered exploitation units. Exploitation is the ability to minimize the impact of environmental threats to friendly forces while simultaneously capitalizing on environmental conditions that maximize the operational advantage over enemy forces. Exploitation units tailor products provided by the characterization unit. Tailoring is the extraction of data that is pertinent to a specific mission profile from the overall characterization of the air and space environment. Tailoring does not mean changing the characterization. To the greatest extent possible exploitation units will use the characterized data provided to them.

1.2. Concept of Operations.

1.2.1. The 25 OWS at Davis-Monthan AFB, Arizona, provides regional and operational-level weather products and information to Air Force and Army units in the West region of the Continental United States.

1.2.2. Meteorological Watch (METWATCH). The 25 OWS performs a continuous METWATCH for Fairchild AFB. METWATCH is a deliberate, continuous process for monitoring terrestrial weather or the space environment in an area or region. The purpose of a METWATCH is to identify when and where observed conditions significantly diverge from forecast conditions, determine courses of action to update or amend a forecast product or group of products, and notify designated agencies.

1.2.3. The WF and 618 AOC/XOW are the primary source of tailored weather services in support of the 92 ARW, the 141 ARW, various headquarters elements, and visiting aircrews. The WF and 618 AOC/XOW will make every effort to ensure that mission-limiting weather is anticipated and exploited, and that safety and RP are maintained.

1.3. Responsibilities.

1.3.1. General responsibilities of the 25 OWS and WF are outlined in AFI 15-128, **para 4.1** and **para 6.2**, respectively.

1.3.1.1. The 25 OWS issues the Fairchild AFB Terminal Aerodrome Forecasts (TAFs), forecast weather warnings and watches, and may provide flight weather briefings to transient aircrews passing through Fairchild AFB. The OWS will issue observed warnings and advisories when the WF is closed.

1.3.1.2. The WF issues all observed advisories and observed warnings when the WF is open.

1.3.1.3. The WF will create Mission Weather Products (MWPs) that fuse theater scale products with local mission requirements to enable the direct inject of weather impacts into warfighter planning and/or execution. Upon request, the WF will provide flight weather briefings and operational weather support for the 36th Rescue Flight (RQF) and Army Aviation Support Facility number 2 (AASF). The WF will also provide flight weather briefings for transient aircrews IAW the WF duty priorities listed in **Table 1.1**

1.3.1.4. 618 AOC/XOW. The 618 AOC/XOW provides flight weather briefings and operational weather support for the 92 and 141 ARWs.

1.3.2. Fairchild AFB Installation Data Page. The 25 OWS and Fairchild WF will coordinate and maintain a Fairchild AFB Installation Data Page detailing TAF specification and amendment criteria, WWA thresholds, desired lead times, mission impacts, unit information, Automated Dissemination System (ADS) back-up contacts and local outage back-up information.

1.3.3. Eyes Forward & Collaboration. The Fairchild WF will act as the eyes forward for the 25 OWS by relaying significant, time-sensitive meteorological information not found in coded meteorological reports to assist in forecast operations.

1.4. Duty Priorities. 92 OSS/OSW Duty Priorities. IAW AFMAN 15-129V2, para 1.3.3.1., the WF has created the following duty priorities based on 92 ARW mission requirements.

Table 1.1. 92 OSS/OSW Duty Priority Listing.

Priority	Duties
1	Perform WF Emergency War Orders Taskings.
2	Execute WF Evacuation.
3	Respond To Aircraft/Ground Emergencies.
4	Respond to Pilot to Metro Service (PMSV) Contacts and Phone Patch Contacts
5	Disseminate WWAs Locally as Required (see NOTE 1)
6	Augment Automated Meteorological Observing System (AMOS) Observations for Mandatory Elements.
7	Severe Weather Action Plan (SWAP) Operations.
8	OWS Backup Support
9	Provide “Eyes Forward” Support to 25 OWS
10	Disseminate Pilot Reports (PIREPs) Locally (See NOTE 1)
11	Disseminate Urgent PIREPs to 25 OWS

12	MEFP -- Produce and Disseminate Forecasts.
13	Transmit Surface Observations and PIREPs Longline
14	Perform MISSIONWATCH Activities.
15	Provide Other Briefing Support
16	Weather Functional Training.
17	Accomplish Administrative Tasks.
NOTE 1: Local dissemination refers to weather observations, forecasts, watches, warnings, and advisories sent to agencies operating an ADS. The WF expects agencies to use the ADS to the fullest potential prior to contacting the WF for weather data, due to the time-critical nature of the information. Agencies without ADS software that have a need for weather data should contact the WF for assistance in acquiring software installation and training or be placed on existing notification trees.	

1.5. Hours of Operation & Contact Information.

1.5.1. WF. Normal airfield and mission services hours of operations are Monday-Friday from 0500L-2100L, closure hours will vary based upon local flying. In addition, WF personnel will be on duty when the airfield is open and no automated observing system capability exists; or SWAP have been activated as outlined in **para 2.8.2**. The WF will stand up operations as directed by the 92 ARW/CC or 92 OG/CC. Staff services are available during normal duty hours or as required. A web-based aircrew-briefing terminal is located in base operations, Flight Planning Room. This briefing terminal allows aircrews to self-brief or schedule a flight weather briefing from the 25 OWS.

1.5.1.1. Prior to closing the station, the weather technician is responsible for contacting the 25 OWS, Air Traffic Control (ATC), Base Operations, and Command Post (CP). The weather technician will not leave the work center until all agencies have been notified.

1.5.1.2. The WF leadership will notify 25 OWS team of any one-time or short term deviations from the published hours of operation, IAW the Fairchild AFB Installation Data Page.

1.5.2. 25 OWS and 618 AOC/XOW. Hours of operation are 24/7, 365 days a year.

1.5.3. Contact Information

1.5.3.1. WF **(**509) 247-5514/8411 / DSN 657-5514/8411

1.5.3.2. WF Alternate Operating Location (AOL) (509) 247-4446/4401 / DSN 657-4446/4401

1.5.3.3. PMSV 234.8 MHz

1.5.3.4. 618 AOC/XOW **(**618) 229-0353 **/** DSN 779-0353

1.5.3.5. 25 OWS **(**520) 228-7338 / DSN 228-7338

1.6. Continuity of Operations Plan (COOP). Continuity of support to the installation is susceptible to communication outages at the 25 OWS, 618 AOC/XOW, and WF.

1.6.1. WF COOP and WF AOL. In the event of a building evacuation, the WF will move to building 2005, first floor, room 125B, Comm (509) 247-4446/4401 / DSN 657-4446/4401. WF members will follow duty-specific standard operating procedures and evacuation checklists (including a list of required back-up equipment) while resuming services, to include operational support and eyes forward responsibilities for the OWS, at the AOL. If access to observing sensing equipment readouts is lost, manual equipment will be used to take observations. Most WF services/support will be provided, but will require a case-by-case assessment depending on communication line status, equipment status, etc. Expect most services to be somewhat degraded (weather products, pilot briefings, etc.) due to limited facilities and loss of dedicated data services, including sensors and various data types (meteorological satellite, radar imagery, etc.). For flight safety reasons, the WF will not evacuate during exercises.

1.6.2. 25 OWS COOP.

1.6.2.1. For short term outages (up to 72 hours), the WF will assume local TAF and weather watch, warning and advisory responsibility.

1.6.2.2. For long-term outages (greater than 72 hours), the 25 OWS will resume all support from an alternate location.

1.6.2.3. Exercises. In coordination with WFs, 25 OWS conducts periodic COOP exercises.

1.6.3. 618 AOC/XOW COOP.

1.6.3.1. IAW AMCI 15-101, if the 618 AOC/XOW loses the capability to provide flight weather briefing services, the WF will assume responsibility for all Fairchild AFB Integrated Flight Management (IFM) and non-IFM weather packages. If the WF is unable to provide the required support, briefing responsibility will be transferred to the servicing OWS.

1.6.3.2. AMC Weather COOP Exercises. AMC weather units conduct coordinated COOP exercises on the second Wednesday/Thursday of each month. AMC/A3AW will issue Special Instructions (SPINS) outlining the functions and capabilities that are to be exercised. As a courtesy, the WF will coordinate COOP timelines and potential impacts with supported units prior to all scheduled COOPs.

1.6.3.2.1. Global Decision Support System (GDSS) Outages. In the event of a GDSS outage, the WF provides MWPs via the 92 OSS/OSW Mission Execution Forecast (MEF) or verbal briefing. Servicing OWSs provide a MEF via email or a verbal briefing,

1.6.3.2.2. GDSS Proficiency/Outage Exercise**.** GDSS proficiency exercises ensure the WF is prepared to support continuity of operations during TACC evacuations, operational surges beyond 618 AOC /XOW's capability to support, or GDSS outages. During GDSS Proficiency/Outage Exercises the WF will:

1.6.3.2.2.1. Provide mission weather packages through GDSS or alternate means if a GDSS outage is simulated.

1.6.3.2.2.2. Ensure all briefing packages are completed and available to the aircrews NLT 4 hours prior to scheduled departure.

Chapter 2

AIRFIELD SERVICES

2.1. General. Airfield services include those actions affecting the Fairchild aerodrome (defined within 5NM of the airfield) or the base as a whole.

2.2. Observations. Observations are taken, recorded, and disseminated IAW AFMAN 15-111, *Surface Weather Observations*, utilizing the AMOS. Most observations are taken automatically by the AMOS with no human intervention. At times, it is necessary for a weather forecaster to augment the system. Automated and augmentation processes are outlined in **para 2.2.7** The following observations are created and disseminated:

2.2.1. Aviation Routine Weather Report Meteorological Terminal Aviation Routine Report (METAR). METAR observations are created between 45 and 59 minutes after every hour. METARs are disseminated both locally and long-line between 55 and 59 minutes after the hour.

2.2.2. Aviation Selected Special Weather Report (SPECI). SPECI is an unscheduled observation completed and transmitted when any of the Fairchild AFB special criteria listed in **Attachment 3** have been observed or sensed. SPECI will contain all data elements found in a METAR plus additional remarks that elaborates on data in the body of the report. All SPECI reports will be prepared and transmitted as soon as possible after the relevant criteria are observed. **Attachment 5** contains an example SPECI weather observation.

2.2.3. Aviation Selected Local Weather Report (LOCAL). During augmentation, the WF will take single element LOCAL observations for altimeter setting changes.

2.2.4. Official Observing Points. The official observing is the location of the primary sensor group and the discontinuity sensor group. During periods of augmentation, the observation site is the manhole cover located on the runway side of building 1. During relocations to the AOL, and augmentation is required, the observation point is marked by a compass rose approximately 35 ft from the AOL flightline exit door.

2.2.5. Observing Point Limitations.

2.2.5.1. The AMOS is properly sited and no limitations are currently noted.

2.2.5.2. Augmented observations taken at the primary augmentation site (Bldg 1). An unobstructed view exists of the runway and its approaches; however, the view west-north-northeast is restricted because of buildings/structures. These limitations are partially compensated by the Cooperative Weather Watch (CWW) program.

2.2.5.3. Augmented observations taken at the AOL are degraded because the view from the west to the north is blocked by buildings. Both ends of the runway are not easily visible from the observation point. There are few adequate ground visibility reference markers beyond 1 mile. These limitations are partially compensated by the CWW program.

2.2.6. AMOS. An automated observation is any observation having been evaluated, prepared, and transmitted by an observing system without human intervention. In automated mode, the AMOS observing system will record and disseminate weather observations. The

AMOS uses time averaging of sensor data. In an automated observation, sky condition will be an evaluation of sensor data gathered during the 30-minute period ending at the actual time of the observation. All other elements evaluated are based on sensor data that is within 10 minutes or less of the actual time of the observation.

2.2.7. Forecaster AMOS Augmentation. Augmentation is the process of having position-qualified weather technicians manually add or edit data to an observation generated by a properly sited AMOS. The two augmentation processes used are supplement and back-up.

2.2.7.1. Supplementing (definition). Method of manually adding meteorological information to an automated observation that is beyond the capabilities of the AMOS to detect and/or report. Table 2.1 identifies elements that are mandatory to supplement.

2.2.7.2. Supplementing procedures. Weather technicians will perform a basic weather watch and be prepared to supplement observations when the airfield is open and the weather conditions in Table 2.1 are observed and/or forecast to occur within 1 hour. Weather personnel are required to log on to an ADS and be prepared to supplement whenever a watch or warning has been issued for tornadic activity.

Table 2.1. Mandatory Supplementary Weather Conditions

Mandatory Supplementary Weather Conditions - Body of Report (Note 1.)
Tornado (**+FC**) (Note 2) (Note 3)
Funnel Cloud (**FC**) (Note 2) (Note 3)
Waterspout (**+FC**) (Note 2) (Note 3)
Hail (**GR**) (≥ ½ inch)
Volcanic Ash (**VA**)
Ice Pellets (**IP**)
Mandatory Supplementary Weather Conditions- Remarks Section of Report (Note 1.)
Funnel Cloud (**Tornadic Activity _B/ E(hh)mm_LOC/DIR_(MOV**)) (Note 2) Snow Depth (Note 4) (only during airfield operating hours and if heavy snow warning has been issued and snowfall is occurring)
NOTES: 1. References for coding of augmentable weather conditions are located in AFMAN 15-111, Chapter 13. 2. The immediate reporting of funnel clouds takes precedence over any other phenomena. 3. Log on to AMOS and be prepared to supplement for tornadic activity anytime a weather watch or warning has been issued for the phenomena. 4. All Remarks and Additive Data references are provided in AFMAN 15-111, Attachment 3.

2.2.7.3. Backup (definition): The method of manually providing meteorological data and/or dissemination to an AMOS observation when the primary automated method is not operational or unavailable due to sensor and/or communication failure.

2.2.7.4. Backup procedures. In the event of AMOS malfunction or failure, back-up procedures will be implemented only during airfield operating hours and/or if tornadic

activity is occurring or forecast to occur. Weather technicians will use manual observing procedures for individual elements when performing back-up operations. Weather technicians will not replace the entire automated observation with a manual observation when backing-up malfunctioning sensors. Weather technicians will provide back-up information IAW AFMAN 15-111 Attachment 2 and Attachment 3. Elements entered will have been observed within 15 minutes of the actual time of the observation. Gusts and squalls will be reported if observed within 10 minutes of the actual time of the observation. When utilizing back-up equipment, all wind and pressure values must be estimated.

2.3. TAF Support. Fairchild AFB TAFs are produced and disseminated by the 25 OWS IAW AFI 15-128, AFMAN 15-124, AFMAN 15-129V1, and the Fairchild AFB Installation Data Page. **Attachment 4** lists forecast specification and amendment criteria. TAFs are valid for 30 hours, apply to the area within the 5NM area of the Fairchild AFB airfield complex, and will be issued at 0300, 1100, and 1900 Zulu time. **Attachment 5** contains examples of typical Fairchild AFB TAFs.

2.4. Resource Protection (RP) Support & Watches, Warnings, and Advisories (WWA). The 25 OWS conducts a continuous meteorological watch to identify and assess emerging and imminent threats to Fairchild AFB. Special Weather Statements (SWS) and Watches, Warnings, and Advisories are special notices provided by the 25 OWS resulting from both the forecast and METWATCH processes to assist military decision makers with resource protection decisions. Watches and warnings provide notice of weather events posing a hazard to life or property. Advisories provide specific notice to an operational agency of environmental phenomena with the potential to impact operations. Customer responses matrix to WWAs are listed in the installation data page hosted at the 25 OWS https://ows.dm.af.mil/ows_unique/25data/moa/Fairchild_AFB_Data_Page.pdf. All changes or updates to installation WWAs will be coordinated through the 92 ARW/CC and appropriate Wing agencies.

2.4.1. Special Weather Statements (SWS). SWSs are special notices issued by the 25 OWS to assist military decision makers with RP decisions.

2.4.2. Weather Watches. A weather watch is a special notice to installation personnel/ supported units of a potential for environmental conditions of such intensity as to pose a hazard to life or property. They are used by installation personnel/supported units to make force protection and risk management decisions. Watches are issued for a 5NM radius of the center point of the Fairchild AFB runway complex and are defined in the installation data page **https://ows.dm.af.mil/ows_unique/25data/moa/Fairchild_AFB_Data_Page.pdf**.

2.4.3. Weather Warnings. A special notice to notify installation personnel when an established weather condition of such intensity as to pose a hazard to life or property is occurring or is expected to occur. Weather warnings provide concise information outlining environmental threats and are used by commanders and personnel to make RP decisions and take protective action. Warnings are issued for a 5NM radius at the center point of the runway and are defined in the installation data page **https://ows.dm.af.mil/ows_unique/25data/moa/Fairchild_AFB_Data_Page.pdf**.

2.4.4. Observed Weather Warnings. Lightning warnings are the only observed warning issued for Fairchild AFB and extends 5NM in all directions from the airfield. Lightning warnings are not issued until lightning is observed, either visually or via the National

Lightning Detection Network. The lightning warning will remain valid until lightning is no longer observed within 5NM for at least 15 minutes. Exception: A lightning warning will not be cancelled if a thunderstorm is within 5NM (as indicated on radar).

2.4.5. Observed Weather Advisories. An observed weather ADVISORY is a special product notifying an end user when an established environmental condition effecting operations is occurring on Fairchild AFB and are defined in the installation data page **https://ows.dm.af.mil/ows_unique/25data/moa/Fairchild_AFB_Data_Page.pdf**.

2.4.6. Forecast Weather Advisories. Forecast weather ADVISORY is a special product notifying an end user when an established environmental condition effecting operations is occurring or is expected to occur on Fairchild AFB and are defined in the installation data page **https://ows.dm.af.mil/ows_unique/25data/moa/Fairchild_AFB_Data_Page.pdf**. All forecast weather advisories will only be issued when NAOC is present and/or expected to arrive in the near future.

2.4.7. WWA Numbering Scheme. Advisories, watches, and warnings are numbered consecutively by identifying the type of weather message (watch, warning, or advisory) followed by a five-digit number. The first two numbers indicate the current month while the second three numbers indicate the sequence number. For example, the message "Weather Warning 02-005" means the month is February (02) and this is the fifth (005) warning issued in the month. The message "Weather Advisory 12-013" means the month is December (12) and this is the thirteenth (013) advisory issued in the month. Examples of different messages are contained in **Attachment 5**.

2.4.8. WWA Upgrades/Downgrades. WWAs will be upgraded (i.e., winds increase from 35 knots to 50 knots) or downgraded as required. Upgrades should meet the desired lead times specified in the installation data page. Only one warning will be in effect at a given time (and will include multiple warning criteria as required) except for forecast tornado warnings and/or observed lightning warnings. Tornado and lightning will be separate warnings. With the exception of tornado and lightning warnings, if a warning is issued for one criteria and it becomes necessary to warn for another criteria, a new warning and new number will be issued, to include all criteria expected. A separate valid time may be specified for each criteria if necessary.

2.4.9. WWA Amendments. When WWAs no longer adequately describe the phenomenon's expected occurrence, a completely new WWA with a new number will be issued. The amendment will clearly state how the amendment or extension affects any previously issued notices.

2.4.10. WWA Extensions. WWAs may be extended provided the extension is issued prior to the expiration of the original notice.

2.4.11. WWA Cancellation. Warnings and watches are cancelled when the weather phenomena is no longer occurring or expected to occur. Warnings not extended or cancelled will automatically expire at the end of the valid period. Observed advisories will be canceled when the criteria is no longer occurring and have not occurred in the last 30 minutes. See **para 2.4.4** for cancellation of observed lightning warnings.

2.5. Dissemination Process.

2.5.1. Observations. Observations taken by either the AMOS automated observing system or the weather technician are disseminated via ADS. When ADS is nonoperational, the WF will relay observations to the following local organizations in order of priority listed in **Table 2.2**

Table 2.2. Notification Priority.

1. Tower commercial (509) 247-4545/5152
2. 92 ARW/CP commercial (509) 247-4051/4056
3. 25 OWS (520) 228-7338

2.5.2. TAFs. 25 OWS disseminates TAFs via ADS. If ADS is nonoperational, the WF will disseminate TAFs to ATC and 92 ARW/CP via telephone, fax, or e-mail.

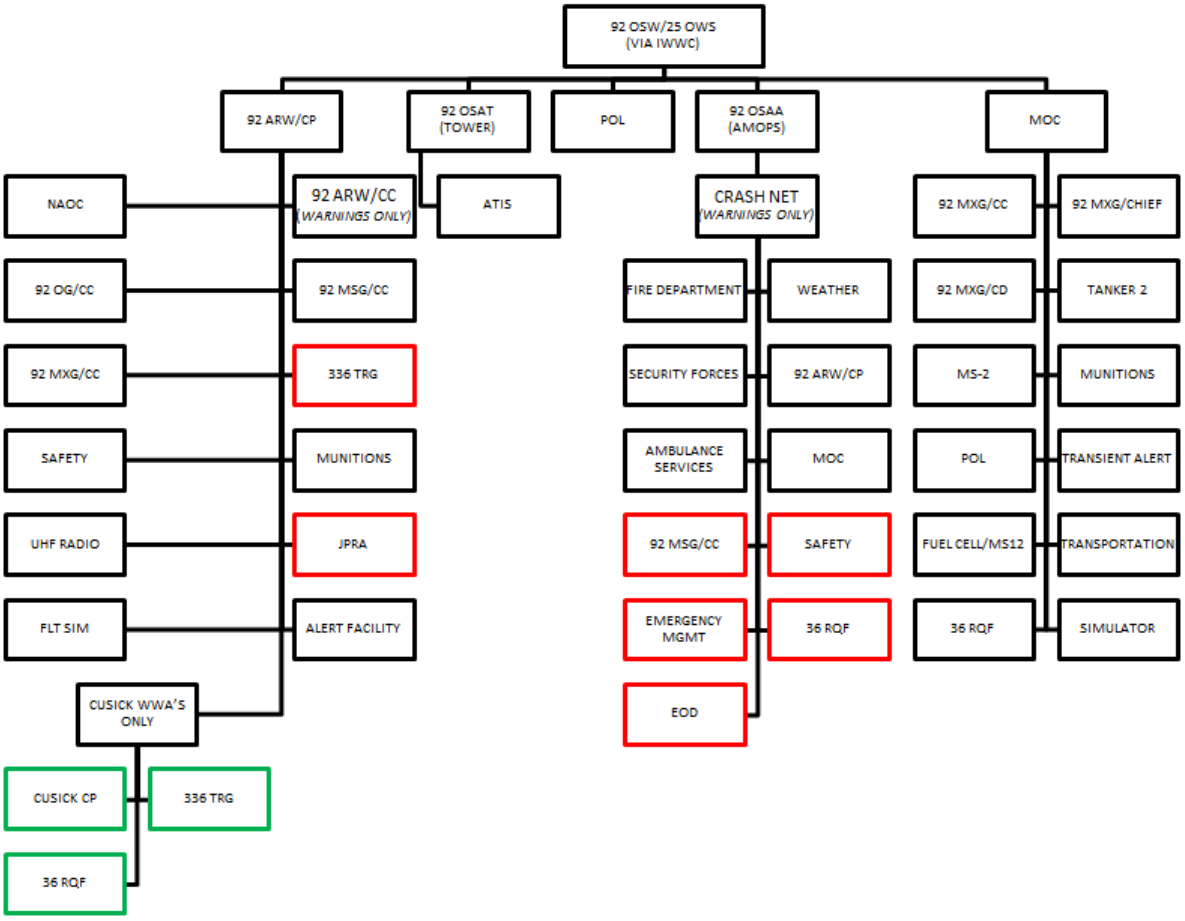
2.5.3. SWSs. SWSs provide advance notice of widespread hazardous weather conditions that have the potential to affect Fairchild AFB. 25 OWS transmits SWSs to WF leadership via email. WF leadership forwards SWSs to 92 ARW leadership.

2.5.4. WWAs. The 25 OWS or WF will enter WWAs into ADS which will disseminate the information to ATC, 92 ARW/CP, 92 OSS/OSAA, MOC, POL. If ADS is out-of-service, 25 OWS or the WF will make back-up calls. Upon notification, these units will further disseminate *all* WWAs using the pyramid notification scheme shown in **Figure 2.1**. In addition, the 92 ARW/CP disseminates all WWAs via E-Mail and/or AtHoc to appropriate base agencies.

2.5.4.1. Lightning Warnings. All lightning warnings are disseminated by the 92 ARW/CP to the base populace via the AtHoc system, allowing members on base to be prepared for dangerous weather. Base Operations disseminates all lightning warnings via the Secondary Crash-net.

2.5.4.2. Tornado Warnings. The 92 ARW/CP has the primary responsibility for sounding the base siren for base tornado warning notification. Alternate CP location has capabilities to sound the siren for a tornado warning.

Figure 2.1. Weather Pyramid Alerting



2.6. CWW. The WF and ATC have established a CWW as required by AFI 13-204V3 and AFMAN 15-111. The agreement outlines each unit's responsibilities when specific meteorological phenomena are observed. Of primary concern is the report of tower visibility differing from the prevailing surface visibility, local PIREPs**,** and any occurrence of previously unreported weather conditions that could affect flight safety or be critical to the safety or efficiency of other local operations and resources. All WF technicians must thoroughly understand and be able to execute every element in the local cooperative weather watch agreement.

2.6.1. Fairchild AFB Tower personnel will:

2.6.1.1. Notify the weather technician when the observed tower prevailing visibility decreases to less than or increases to equal or exceed 4 statute miles.

2.6.1.2. Report changes in tower prevailing visibility to the weather technician when tower visibility is less than 4 statute miles and different from the surface prevailing visibility.

2.6.1.3. Notify the weather technician when PIREPs are received of previously unreported weather conditions that could affect flight safety or be critical to the safety

and efficiency of other local operations and resources. PIREP information will be relayed to weather personnel not later than 5 minutes after receipt.

2.6.2. When augmenting observations Fairchild AFB weather technicians will:

2.6.2.1. Notify the tower, as soon as possible, whenever the prevailing visibility at the official weather observation point decreases to less than or increases to equal or exceed 4 statute miles.

2.6.2.2. Re-evaluate surface prevailing visibility, as soon as practicable, upon initial receipt of a differing control tower value and upon receipt of subsequent reportable changes at the control tower level. Note: automated stations do not include tower visibility in observation remarks.

2.6.2.3. Use control tower values of prevailing visibility as a guide in determining the surface visibility when the view of portions of the horizon is obstructed by buildings, aircraft, etc.

2.6.3. ATC Limited Observation Training. The 92 OSS/OSW oversees the Fairchild AFB Limited Observation Training Program. ATC personnel requiring training should contact the WF at DSN 657-5514/Commercial (509) 247-5514 to schedule an appointment. To satisfy Limited Observation Training requirements, personnel are required to pass a written exam and receive an orientation of the weather facilities.

2.7. PMSV Support. Weather information is available via PMSV during duty hours on frequency 234.8 MHz. The duty forecaster will monitor PMSV traffic for all aircraft contacts. For aircraft outside the range of our PMSV system, the Fairchild WF or 25 OWS can provide PMSV support through a phone patch to the 92 ARW/CP (DSN 657-4051/4056 or Commercial (509) 247-4051/4056). PMSV outages are discussed in **para 5.3.2**

2.8. Emergency Action(s) Response.

2.8.1. Aircraft Mishap. When notified on an aircraft mishap, the WF will initiate a save of applicable data used in the development of any weather products provided and provide this data to investigating agencies upon request.

2.8.1.1. If the WF provided the MWP, the WF will notify the OWS Operations Floor Production Supervisor of all aircraft mishaps as soon as possible after notification of the event. The WF will coordinate with 25 OWS to save all applicable data and products. If products from other OWSs were used, the WF will coordinate with all applicable OWSs to ensure data is saved. Enough data covering weather conditions before and after the mishap will be saved to fully reconstruct environmental conditions.

2.8.1.2. If an OWS, 618 AOC/XOW, or another WF provided the MWP, they will conduct the data save in coordination with any other Air Force Weather units involved.

2.8.2. SWAP. The WF will initiate SWAP in accordance with criteria listed in table 2.3. SWAP ensures sufficient manpower is available to meet the increased demand for timely weather information from its supported unit(s) during significant weather events. It is imperative that timely and accurate weather watches, warnings, and advisories are disseminated to all agencies to ensure personnel and RP. The WF will initiate a heightened METWATCH. The WF forecaster will notify the WF Superintendent and/or WF NCOIC of SWAP activation during normal staff duty hours. During non-duty hours, the 25 OWS will

notify the WF standby forecaster when conditions listed in **table 2.3** have been met and the WF technician will activate SWAP.

Table 2.3. Conditions Requiring SWAP Activation.

SWAP ACTIVATION Criteria
One of the following is issued by the OWS:
Tornado Watch
Tornado Warning
Severe Thunderstorm Warning (Damaging Winds ≥ 50KTS and/or Damaging Hail ≥ ¾ inch)

2.8.3. WF Forecaster Recall Requirements. The WF forecaster will be notified/recalled under the following circumstances:

2.8.3.1. The 25 OWS notifies the standby forecaster prior to issuing any watch or warning for Fairchild AFB.

2.8.3.2. ATC via the 92 ARW/CP or the 25 OWS notifies the standby forecaster when automated weather sensor display data is unavailable.

2.8.3.3. ATC via the 92nd ARW/CP or the 25 OWS notifies the standby forecaster when observations are not being transmitted locally or are not representative of current conditions.

2.8.4. Chemical, Biological, Radiological, Nuclear, and High-yield Explosive Response.

2.8.4.1. If surface observations or alphanumeric forecasts are requested, make sure that observations and forecasts provided are representative of the location/time of the Chemical, Biological, Radiological, Nuclear event.

2.8.4.2. The WF will work closely with Emergency Management or other functions to ensure the supported commander gets a consistent picture.

2.8.4.3. Upon request from Emergency Management or any other agency, the WF will obtain/provide Chemical Downwind Messages from the servicing CU.

Chapter 3

MISSION SERVICES

3.1. General. The WF, 25 OWS, and 618 AOC/XOW support the Fairchild AFB flying and non-flying missions. This chapter identifies the flying and non-flying missions and the weather support provided.

3.2. Flying Missions. The WF and the 618 AOC/XOW provide weather support to the flying units listed in **Attachment 6.** The bulk of flying operations at Fairchild AFB are supported by 618 AOC/XOW.

3.3. Mission Weather Products (MWPs). MWPs fuse theater scale products with local mission requirements enabling the direct inject of weather impacts into warfighter planning and/or execution. The result is a product designed to provide timely, accurate, and relevant environmental information for planning and execution. The MWPs must be horizontally consistent with (but not necessarily mirror) products issued by any OWS and Air Force Weather Agency (AFWA).

3.3.1. Flight Weather MWPs. GDSS is the primary command and control (C2) system used to request and receive weather briefings to Air Mobility Command (AMC) owned/gained flying units. GDSS provides a unique product that incorporates the requirements of all 92 ARW/141 ARW-based flying units into a common format. Updates can be obtained by calling 618 AOC/XOW at DSN 576-0353/ Commercial (618) 229-0353, or by contacting the WF at DSN 657-5514/Commercial (509) 657-5514.

3.3.2. 336th Training Group (TRG)/ 58 Operations Group (OG) Support. The 58 Special Operations Wing (SOW) has two GSU units at Fairchild. The 336 TRG is the Air Force's sole unit responsible for training the famed SERE (Survival, Evasion, Resistance, Escape) specialists. The 336 TRG is broken into three squadrons.. The 336th Training Support Squadron encompasses more than a dozen Air Force specialties including medical and logistics to support the 336 TRG. The 66th Training Squadron is responsible for training all of the SERE instructors and the 22nd Training Squadron trains all of the Air Force's aircrews. The 36th Rescue Flight belongs to the 58 OG and flies UH-1Ns aiding in the SERE school's jump and student training while supporting local authorities when needed for search and rescue. 92 OSS/OSW provides all weather support for the 336 TRG during standard operating hours IAW the WF duty priorities listed in Table 1.1., during hours of closure the WF will set-up support with the 25 OWS. See Attachment 8 for OSW provided MWP example.

3.3.3. AASF 2. The AASF 2 is a Washington Army National Guard Flying Unit which supports MDAY units with aviation assets. The AASF 2 flies HH-60s primarily in the Inland Northwest and the 92 OSS/OSW provides all weather support for the AASF 2 during standard operating hours IAW the WF duty priorities listed in **Table 1.1,** during hours of closure the WF will set-up support with the 25 OWS. See Attachment 8 for OSW provided MWP example.

3.4. MISSIONWATCH. This is a deliberate process for monitoring terrestrial weather and/or the space environment for specific mission-limiting environmental factors.

3.4.1. WF Briefed Sorties. It is through MISSIONWATCH that MWP amendments/updates are accomplished. During rapidly changing weather, the WF will inform the OWS when weather products issued by the OWS do not accurately reflect observed conditions and impact flight safety. The WF will amend/update the MWP as necessary. In addition, when previously unforcasted weather conditions develop that place a mission at risk, the WF will contact the 92 ARW/CP with updates. The CP will pass this information to the aircrew. MISSIONWATCH will be conducted and logged.

3.4.2. 618 AOC/XOW Briefed Sorties. The 618 AOC/XOW will MISSIONWATCH all sorties they support. If significant changes to weather occur, the 618 AOC/XOW will update the Weather Threat Assessment (WTA). IAW AMCI15-101, the 92 ARW/CP subscribes to WTAs to receive MISSIONWATCH alerts. The CP will pass WTA information to the aircrew. The following link can be used to subscribe to alerts or view WTA information: **https://tacc.us.af.mil/?action=WTAMain**.

3.4.2.1. The WF will:

3.4.2.1.1. Actively MISSIONWATCH all non-IFM Fairchild AFB sorties. MISSIONWATCH will be conducted and logged.

3.4.2.1.2. Review weather packages in GDSS and backup the 618 AOC/XOW IAW paragraph 1.6.3.

3.4.2.1.3. Coordinate with the 618 AOC/XOW if weather deviates from the published WTA.

3.5. Operations Plan (OPLAN) 8010. Assumption of Alert (AOA) briefings will be provided whenever the 92 and 141 ARWs are on alert status. The 92 ARW/XP or 92 OSS will host generated force sorties (GFS) and AOA briefings during conditions of increased readiness or Operational Readiness Inspections (ORI) when aircraft are generated (see OPLAN 8010 Annex H). The briefings will cover data contained in the alert weather package.

3.5.1. Alert weather packages will be provided to alert crews as coordinated with the 92/141 ARW/XP. 92 ARW/CP also has access to retrieve updates as needed. The alert package will include the following: Planning data for 24 hours, regional satellite picture, thunderstorm hazard chart, turbulence hazard chart, icing hazard chart, tropical weather hazards, volcanic activity, flight level winds between 260-350, worst expected weather conditions for 24 hours for pre-coordinated alternate airfields, and space weather impacts.

3.6. Pre-Deployment Planning and Mobility Concept Briefs. These briefs will be provided to include: Forward Operation Base (FOB) climatology/extended forecast and local forecast conditions.

3.7. NAOC. Weather will be provided to NAOC operations IAW applicable directives.

3.8. Post-Mission Analysis/Feedback. Aircrews should contact 618 AOC/XOW or the WF with post-mission information and/or follow-up support. The 618 AOC/XOW and the WF will utilize customer feedback to improve internal processes and enhance training, forecast proficiency, and product accuracy. Formal/informal feedback methods include:

3.8.1. Completion of 92 OSS/OSW Feedback worksheet or 618 AOC/XOW feedback solicitation email.

3.8.2. Phone call or an e-mail to the 618 AOC/XOW or the WF.

3.8.3. Face-to-face feedback after briefing and/or mission completion.

3.9. Transient Aircrew Support. Weather technicians will provide or arrange for weather support for transient aircrews IAW the duty priorities list **Table 1.1** The WF may provide flight weather briefings, and/or updates to aircrews. Weather technicians may arrange for weather support from the 25 OWS briefing cell when greater duty priorities take precedence. The 25 OWS briefing cell can be reached at DSN 228-6598/6599/6588, commercial (509) 228-6598/6599/6588, or via web access from the aircrew briefing terminal located in the flight planning room. **https://ows.dm.af.mil/wx_brief/index.cfm?fuseaction=request&UID=&BW=H&UF=O&AOR=2&USEHF=1**.

3.10. Non-Flying Missions. The WF and 25 OWS support various non-flying missions (e.g., Wg Picnic, change of command ceremonies, Morale Welfare and Recreation) through RP (WWAs). Specific support to non-flying missions is identified in **Chapter 4**. Specialized weather information can be provided to support any non-flying mission upon request. Non-governmental agencies should request weather information and support through 92 Public Affairs.

3.11. Space Weather Impacts. Fairchild's missions have a wide-variety of parameters affected by various space-weather conditions (High Frequency and Ultra High Frequency communication, radar, Global Positioning System communications, etc.). The WF and 618 AOC/XOW provide space impacts, upon request, on their MWPs. More detailed products are available at: **https://weather.af.mil/confluence/display/AFWWEBSTBT/Space+Weather+Main+Page**
An example of the daily discussion is provided in **Attachment 7.**

Chapter 4

STAFF SERVICES

4.1. General. Staff services are typically accomplished by WF leadership and include meteorological functions (briefings), ensuring the WF is trained and equipped for day-to-day operations, and cultivating relationships with base agencies to ensure WF support is optimal.

4.2. Staff Meteorological Functions. Staff meteorological functions aid leadership in identifying and understanding specific weather and environmental impacts. The WF is available to assist commanders in determining weather support requirements and impacts to operations. Examples of staff meteorological functions provided are:

4.2.1. 92 ARW Staff Briefings. Staff weather briefings for 92 ARW (wing stand up) will be provided as required. Standard information includes Fairchild 5-Day weather outlook with a focus on any affected Wing events, and any additional slides/information that Wing leadership requests.

4.2.2. Installation Control Center (ICC)/Crisis Action Team (CAT) Briefings. The WF will provide weather support as required for ICC/CAT briefings. This includes real-world emergency, exercise, and deployment briefings. Each briefing will be tailored to provide the appropriate weather intelligence required by 92 and 141 ARW leadership.

4.2.3. Instrument Refresher Course (IRC) Briefings. In accordance with AFMAN 11-210, *Instrument Refresher Course (IRC) Program,* computer based training is available for the weather portion of the briefing. If requested, the WF can provide a briefer to discuss more detailed local weather effects and impacts. This briefing will include airfield and mission services, WF capabilities, RP, seasonal/regional weather and space weather impacts (when applicable).

4.2.4. Pre-deployment Planning Briefings. The WF will provide pre-deployment weather briefings as requested. Briefing content will be tailored to meet customer requirements. For example, an aviation unit will receive weather impacts at the deployed location on their flying mission, in addition to the standard surface weather information usually presented to ground units. A ground-based unit will receive a briefing on surface temperatures, wind speed, potential for blowing sand and dust, and precipitation.

4.2.5. Climatology Services. WF will provide climatology information when requested, for example end of month climatology or historical climatology.

4.3. Staff Integration Functions. WF leadership will ensure their unit is adequately resourced to meet both operational and staff requirements. In addition to leadership and management of unit activities, these unit members will also function as a direct interface with the supported unit commander and staff, and provide direct support to command, control and planning functions. Specific integration with base agencies is outlined below.

4.3.1. 92 ARW, 141 ARW CC's (XP). The WF will assist in periodic exercises tailored to upcoming seasonal weather or other environmental concerns and will educate base agencies on the purpose and applicability of weather watches, warnings and advisories.

4.3.2. 92 ARW CP. The WF will notify the CP whenever the base weather station is evacuated and/or the AOL is activated The WF will notify CP of all WWAs via Integrated Weather Warnings Capability (IWWC), telephone, email or in-person during airfield operating hours.

4.3.3. 92 ARW Public Affairs. The WF provides tours of the base weather station for community groups and others when coordinated by Public Affairs.

4.3.4. 92 OSS/OSAA. The OWS or WF provides notification of all forecasted weather watches, warnings, and advisories via IWWC, telephone, e-mail, or in-person during airfield hours of operations.

4.3.4.1. The WF will notify the OSAA whenever the base weather station is evacuated and/or the AOL is activated.

4.3.4.2. WF leadership will participate as a member of the Airfield Operations Board (AOB) as directed in AFI 13-204 Vol III, Airfield Operations Procedures and Programs

4.3.5. 92 OSS/OSAT.

4.3.5.1. The WF provides notification of all-weather watches, warnings, and advisories via IWWC/telephone/or e-mail.

4.3.5.2. The WF will notify the OSAT whenever the base weather station is evacuated and/or the AOL is activated.

4.3.5.3. The WF will notify OSAT of all ADS and AMOS outages.

4.3.6. 92 CES. The WF will provide a monthly climatology report.

4.3.7. All Supported Flying Units (92 ARW, 141 ARW, 36 RQF, and AASF 2). The WF will provide services as outlined throughout this publication.

4.3.8. 336th Survival Training Group (TRG).

4.3.8.1. The WF will provide weather briefings for 336 TRG senior staff meetings upon request.

4.3.8.2. The WF will provide weather forecasts to support para drop operations and training. A 24-hour advance notice is required for weather forecasts outside of the local area.

4.3.8.3. Manpower permitting, the WF will provide any special operational, climatological, or flight safety briefings upon request. If possible, two weeks advanced notice is requested.

4.3.8.4. For approaching threats to Naval Air Station (NAS) Pensacola (within 300NM and within a 5-day forecast period), the WF will relay tropical forecasts to the 336 TRG Commander. Specifically, provide tropical cyclone forecasts and updates (Tropical Cyclone-Threat Analysis Product (TC-TAP)) which are derived from the specialized tropical forecast organizations.

4.4. Reciprocal Support.

4.4.1. 92 ARW/CP will:

4.4.1.1. Initiate OPREP-3 report when required and immediately notify WF when significant weather causes damage to wing assets.

4.4.1.2. Ensure dissemination of weather watches, warnings, and advisories as outlined in **Chapter 2** of this instruction.

4.4.1.3. Notify the WF forecaster-on-duty immediately of all aircraft emergencies, incidents, or accidents.

4.4.1.4. Relay information, to the WF, concerning toxic substance spills as soon as available.

4.4.1.5. Run applicable Quick Reaction Checklists (QRCs) to notify wing leadership and various base agencies of severe weather when notified by the OWS or the WF.

4.4.1.6. Provide Ultra High Frequency connectivity to aircrews via phone patch with the WF or 25 OWS when the weather PMSV is inoperative for an extended period.

4.4.1.7. Store and provide 24-hour access to WF 's classified documents if the WF evacuates primary site.

4.4.2. 92 ARW Public Affairs will:

4.4.2.1. Coordinate tours of the WF by community groups and others with the WF superintendent or designee.

4.4.2.2. Act as the liaison between the WF and all non-military agencies and/or individuals.

4.4.3. 92 OSS/OSAA.

4.4.3.1. Notifies WF personnel of in-flight, ground emergencies, or mishaps and termination via the secondary crash network.

4.4.3.2. Ensures dissemination of weather warnings and advisories as outlined in Chapter 2 of this instruction.

4.4.3.3. Provides notice of runway closures.

4.4.3.4. Publishes WF hours and pertinent operational information in the Flight Information Publication (FLIP). OSW will notify airfield manager of changes.

4.4.4. 92 OSS/OSAT.

4.4.4.1. Participates in CWW.

4.4.4.2. Notifies the WF of all changes in active runway.

4.4.4.3. Notifies the WF of any light setting changes on the high-intensity runway lights.

4.4.4.4. Relays pilot weather reports to weather personnel.

4.4.4.5. Provides control tower orientation training for weather personnel.

4.4.4.6. Initiates radio checks to ensure proper PMSV operation.

4.4.5. 92 ARW Safety Office will: Request a Fairchild AFB WF briefer for seasonal weather briefings and provide two weeks advance notice when possible.

4.4.6. 92 Communications Squadron (CS) will:

4.4.6.1. Provide, coordinates, or arranges for the installation, maintenance, and repair of all weather communication and meteorological sensing equipment, except for the communication and meteorological equipment maintained by contract (i.e., ADS).

4.4.6.2. Ensure scheduled maintenance does not degrade METWATCH and/or MISSIONWATCH performed by the WF during periods of inclement weather and notify the weather technician prior to routine maintenance.

4.4.6.3. Utilize the restoration priorities for weather communications and meteorological sensing equipment outlined in this document.

4.4.6.4. Notify the responsible service agents for weather communications and meteorological sensing equipment outages.

4.4.6.5. Coordinate with off-base agencies to repair off base lines.

4.4.6.6. Perform necessary follow-up actions as required until full service is restored.

4.4.6.7. Ensure weather data and telephone circuits are assigned repair priorities.

4.4.6.8. Ensure established maintenance response times are met.

4.4.6.9. Ensure a 24-hour point of contact for reporting outages and assigning job control numbers is available.

4.4.6.10. Coordinate with WF shift supervisor prior to taking any equipment down for maintenance.

4.4.7. 92 Civil Engineering Squadron will:

4.4.7.1. Provide backup power to the WF at 901 W. Boston.

4.4.7.2. Provide ample heating and cooling to weather computer systems so they may operate correctly.

4.4.7.3. Contact the WF Superintendent or NCOIC to request climatological data and specialized support for projects on Fairchild AFB.

4.4.8. 92 Security Forces Squadron. Promptly inform the WF of any hazardous weather reported by Security Forces personnel (tornado, hail, etc).

4.4.9. All Supported Flying Units (92 ARW, 141 ARW, 36 RQF, and AASF 2) will:

4.4.9.1. Notify weather technician of current and planned weather alternates and any special considerations affecting duration of tour (i.e., weather categories, exercise/deployment considerations, etc.).

4.4.9.2. Notify the WF of required additional support as soon as it becomes known to include monitoring of alternate observations/forecast and tracking of weather conditions affecting local flying operations.

4.4.9.3. Provide timely notification of changes to scheduled operations affecting weather support requirements as soon as the change is identified.

4.4.9.4. Provide PIREPS either directly to the WF or through the PMSV, tower, or Supervisor of Flying.

4.4.9.5. Provide feedback on all-weather briefings via e-mail or survey to the WF or 618 AOC/XOW.

4.4.9.6. Provide guidance (at least two weeks in advance) to the WF regarding any weather training/educational requirements (or changes in requirements) if applicable.

4.4.10. Base Operations Flight Information Publication (FLIP) Manager. The FLIP manager will submit FLIP updates provided by the WF to Air Force Flight Standards Agency/Operating Location-D.

4.4.11. 92 AMDS/SGPB, Bioenvironmental Engineering (BE). BE personnel will provide Wet Bulb Globe Temperature (WBGT) when forecast outside temperature reaches 85 ^{o}F as a daily high. When temperatures fall below 10 ^{o}F, BE will determine the Wind Chill Temperature and Frostbite Risk Level (FRL). BE will obtain outside ground temperature and wind speed from the base weather flight or JET webpage to determine WBGT and Wind Chill reporting requirements. BE will notify the installation command post of personnel protective measures. The Command Post shall relay the information using the base communication networks as needed.

4.4.12. All Weather Support Recipients will:

4.4.12.1. Notify WF through proper chain of command when new weather support requirements are identified.

4.4.12.2. Coordinate changes/additions to weather support requirements as soon as they are foreseen.

Chapter 5

WEATHER EQUIPMENT

5.1. General. This chapter provides a brief description of the meteorological and communications equipment used by the WF. Additionally, it provides information on backup systems, maintenance, and restoring priorities.

5.2. Meteorological Equipment. The WF uses the FMQ-19 and GRS weather radar to determine the current state of the atmosphere. These critical systems provide customers the most timely, accurate, and relevant weather intelligence possible. **Note:** TMQ-53 is a tactical automated observing system that is used by the WF during contingency and exercise operations. The TMQ-53 provides a capability that is very similar to the FMQ-19.

5.2.1. AMOS. AMOS refers to any certified Air Force owed and Air Force or Army certified observing system (e.g. AN/FMQ-19, AN/TMQ-53, Automated Surface Observing System (ASOS)). The AMOS samples, measures, and reports: temperature, wind speed and direction, visibility, cloud base height and amount of coverage, pressure, liquid equivalent precipitation accumulation, and ice accretion during freezing precipitation. These measurements are processed to create properly formatted, fully automated observations that comply with applicable various reporting standards and protocols defined in the Federal Meteorological Handbook (FMH-1), the World Meteorological Organization (WMO), the Federal Aviation Administration (FAA), National Weather Service (NWS), and military reporting standards.

5.2.2. Gibson Ridge Software (GRS). The WF utilizes the GRS applications including GRLevel2 for viewing Level II radar data and GRLevel3 for viewing Level III data. Both viewers feature high speed, high quality radar displays with an intuitive user interface. Weather technicians make use of the software to analyze complex radar signatures and obtain detailed information on storm intensity, movement, internal circulation, and general wind flow. Weather technicians will routinely incorporate the latest radar information into all mission execution forecasts and RP products.

5.3. Communications Equipment. The following systems are the backbone of the WF communications network:

5.3.1. ADS. Automated Dissemination System (ADS) refers to any Air Force, Army or NWS accredited dissemination system (e.g. Joint Environmental Toolkit or Advanced Weather Interactive Processing System (AWIPS)). As discussed in **para 2.5** of this instruction, ADS is the primary system for disseminating forecast, observations, warnings, watches, and advisories. Telephones are used as a backup for key aircraft controlling agencies.

5.3.2. PMSV Radio. The PMSV Radio (234.8 MHz) allows the WF to communicate with aircrews, both on the ground and flying, as well as tower personnel. For short term outages aircrews may contact the ATC who will then relay PIREPS to the WF. During extended outages, Airfield Operations will be notified and disseminate a Notice to Airmen (NOTAM) for aircrews to contact 92 ARW/CP and arrange for Giant Talk support, which will consist of a phone patch to the WF or the OWS.

5.3.3. Phones/Hotlines. Phones and hotlines serve primarily for rapidly passing along critical, time-sensitive information, as well as to serve for backup services.

5.3.4. Local Area Network (LAN). The WF relies heavily on the LAN to improve the timeliness and accuracy of weather intelligence to our customers.

5.4. Maintenance.

Table 5.1. identifies which organizations provide preventive maintenance and repair weather and communications equipment.

Table 5.1. Equipment Maintenance List.

Organization	Equipment
92 CS/SCOA (Airfield Systems)	AMOS
AFWA Fielded Systems	ADS
92 CS/SCOQ (Telephone Systems)	Phones/Hotlines
92 CS/SCOI (Network Maintenance)	LAN/Internet Connectivity

5.4.1. Restoral Priorities. Priorities for restoring critical systems exist in the event natural disasters or any other anomaly, simultaneously impacting systems base wide. Significant indicates a situation where the equipment is completely inoperative, while minimal means the equipment is in limited operation. The priorities for weather equipment are listed in **Table 5.2** below (priorities may be adjusted based on forecasted weather):

Table 5.2. Equipment Restoral Priorities.

Equipment	Organization	Response Times Significant/Minimal
PMSV Radio	92 CS/SCOTR	Immediate/24 hours
AMOS	92 CS/SCOA	Immediate/24 hours
LAN/Internet Connectivity/Phones/Hotlines/ADS	92 CS/SCOIN	Immediate/12 hours

5.5. Building Power. In the event of a commercial power interruption, Bldg 1 will automatically switch to a backup generator.

BRIAN M. NEWBERRY, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 10-206, *Operational Reporting*, 06 September 2011

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OPLAN 8010, *Strategic Deterrence and Global Strike*

OSAA OI 13-204, *Airfield Management*, 31 July 2011

AFPAM 48-151 AFGM4, *Thermal Injury*, 7 May 2013

Fairchild Data Page,
https://ows.dm.af.mil/ows_unique/25data/moa/Fairchild_AFB_Data_Page.xlsx

Prescribed and Adopted Forms.

Prescribed Forms: There are no prescribed forms.

Adopted Forms:

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AASF—Army Aviation Support Facility

ADS—Automated Dissemination System

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFB—Air Force Base

AFPD—Air Force Policy Directive

AFWA—Air Force Weather Agency

AGL—Above Ground Level

AOL—Alternate Operating Location

AMC—Air Mobility Command

AMCI—Air Mobility Command Instruction

AMOS—--Automated Meteorological Observing System

ARW—Air Refueling Wing

ATC—Air Traffic Control

CAT—--Crisis Action Team

COOP—Continuity of Operations Plan

CP—Command Post

CS—Communications Squadron

CWW—Cooperative Weather Watch

DA—Density Altitude

FLIP—Flight Information Publication

GRS—Gibson Ridge Software

IAW—In Accordance With

ICC—Installation Control Center

IRC—Instrument Refresher Course

IWWC—Integrated Weather Warnings Capability

KT—Knots

LAN—Local Area Network

METAR—Meteorological Terminal Aviation Routine Report

METWATCH—Meteorological Watch

MOV—Moving

MWP—Mission Weather Product

NWS—National Weather Service

OPR—Office of Primary Responsibility

OSS—Operations Support Squadron

OWS—Operational Weather Squadron

PIREP—Pilot Report

PMSV—Pilot-to-Metro Service

RDS—Records Disposition Schedule

RVR—Runway Visual Range

SM—Statute Mile

SPECI—Special

SWAP—Severe Weather Action Plan

TACC—Tanker Airlift Control Center

TAF—Terminal Aerodrome Forecast

WF—Weather Flight

WSHFT—Wind Shift

Attachment 2

SPECIAL WEATHER OBSERVATION CRITERIA

A2.1. A Special weather observation will be taken and disseminated for listed criteria:

A2.1.1. Visibility. When the prevailing visibility decreases below or, if below, increases to equal or exceeds any of the values listed below:

Table A2.1. Visibility Levels.

Visibility (Statue Miles)	3	**2 1/2**	2	**1 3/4**	**1 5/8**	**1 1/2**	**1 1/4**	1	**3/4**	**5/8**	**1/2**	**3/8**	**1/4**
Note: Items in bold/underlined indicate criteria found in the high and low altitude FLIPs													

A2.1.2. Ceiling. When the ceiling goes below or, if below, increases to equal or exceeds any of the values listed below:

Table A2.2. Ceiling Levels.

Height (feet)	3,000	2,000	1,500	**1,100**	1,000	800	700	**600**	500	**400**	300	**200**
Note: Items in bold/underlined indicate criteria found in the high and low altitude FLIPs												

A2.1.3. Sky Condition. A layer of clouds (it does not have to be a ceiling) or obscuring phenomena aloft is observed below 1100 feet and no layer was reported below this height in the previous METAR or SPECI.

A2.1.4. Wind.

A2.1.4.1. Shifts. Wind direction changes by 45 degrees or more in less than 15 minutes and the wind speed is 10 knots or more throughout the wind shift.

A2.1.4.2. Squall. A strong wind characterized by a sudden onset in wind speed increasing at least 16 knots and sustained at 22 knots or more for at least 1 minute. A SPECI is not required to report a squall if one is currently in progress.

A2.1.5. Volcanic Ash. Eruption or volcanic ash cloud first noted.

A2.1.6. Thunderstorm.

A2.1.6.1. Begins (Note: A SPECI is not required to report the beginning of a new thunderstorm if one is currently reported.).

A2.1.6.2. Ends (**Note:** 15 minutes after the last occurrence of criteria for a thunderstorm; an audible sound of thunder, lightning within five NM of the airfield, etc.).

A2.1.7. Precipitation.

A2.1.7.1. Hail begins or ends.

A2.1.7.2. Freezing precipitation begins, ends, or changes intensity.

A2.1.7.3. Ice pellets begin, end, or change intensity.

A2.1.7.4. Any other type of precipitation begins or ends. **Note:** Except for freezing rain, freezing drizzle, hail, and ice pellets, a SPECI is not required for changes in type (e.g., drizzle changing to snow grains) or the beginning or ending of one type while another is in progress (e.g., snow changing to rain and snow).

A2.1.8.1. Tornado, Funnel Cloud, or Waterspout. A supplemented SPECI or METAR observation is required when a tornado is first seen, in progress or ends.

A2.1.9. Runway Visual Range (RVR). WF will provide RVR output according to the specifications listed in **Table A3.3**

Table A2.3. RVR Reporting.

Runway Visual Range (RVR)
- Prevailing visibility first observed ≤ 1SM/1600 meters, again when prevailing visibility goes above 1SM/1600 meters.
- RVR for active runway decrease to less than or, if below, increase to equal or exceed: - 6,000 feet (P1500 meters) - 5,000 feet (1500 meters) - 4,000 feet (1200 meters) - 3,500 feet (1100 meters) - 2,400 feet (0750 meters) - 2,000 feet (0600 meters) -1,800 feet (0550 meters)
- All published RVR minima applicable to the runway in use.
- RVR is first determined as unavailable (RVRNO) for the runway is use, and when it is first determined that the RVRNO report is no longer applicable, provided conditions for reporting RVR exist.

A2.1.10. Upon Resumption of Observing Services. A special (SPECI) observation will be taken within 15-minutes after the weather technician returns to duty following a break in observing coverage or augmentation at the observing location unless a METAR observation is filed during that 15-minute period

A2.1.11. Aircraft Mishap. When notified of an aircraft mishap, the WF will check the latest AN/FMQ-19 observation (i.e., METAR/SPECI/OMO (one minute observation) and perform augmentation/back-up if required. When operating in a back-up mode WF will immediately take a SPECI observation IAW AFI 15-111.

A2.1.12. Alert Observation. Weather technician will transmit a SPECI observation via the ADS. At a minimum the weather technician will notify Command Post of the following weather criteria: Winds in magnetic, Temperature, Altimeter setting, and Pressure Altitude.

A2.1.13. LOCAL Altimeter Setting Observations. Single element LOCALs for altimeter setting can be entered in the ADS Form 3813 for dissemination. If passed by voice, altimeter LOCALs can be recorded on AF 3803 if not recorded on a local dissemination log or a tape recording. If altimeter LOCALs are input into an ADS (e.g., Joint Environmental Toolkit),

the temperature and dew point must also be encoded for the ADS to properly calculate PA and DA.

A2.1.14. Any other meteorological situation that, in the weather technician's opinion, is critical.

Attachment 3

FORECAST SPECIFICATION AND AMENDMENT CRITERIA

A3.1. Specification Criteria. The TAF will specify the time of occurrence, duration, and the intensity (if applicable) of expected weather conditions. The following weather criteria will be specified in TAFs if expected to occur during the forecast period:

A3.1.1. Ceiling and/or visibility is forecast to decrease less than or if below, is forecast to equal or exceed any of the following levels:

Table A3.1. Ceiling/Visibility Forecast levels.

Ceiling	Visibility	Category
≥ 2,000 FT	≥ 3 SM (4,800 M)	E
≥ 1,000 FT	≥ 2 SM (3,200 M)	D
≥ 700 FT	≥ 2 SM (3,200 M)	C
≥ 200 FT	≥ 1/2 SM (800 M)	B
< 200 FT	< 1/2 SM (800 M)	A

A3.1.2. Wind:

A3.1.2.1. A change in wind speed of 10 knots or more

A3.1.2.2. An onset, duration, and intensity of wind gusts by 10 knots or more.

A3.1.2.3. A change in prevailing wind direction of more than 30 degrees when the predominant wind speed or gusts are expected to be more than 15 knots.

A3.1.3. Icing, not associated with thunderstorms, from the surface to 10,000 feet Above Ground Level (AGL).

A3.1.4. Turbulence (for Cat II aircraft), not associated with thunderstorms, from the surface to 10,000 feet AGL.

A3.1.5. Non-convective low-level wind shear.

A3.1.6. Any weather warning criteria (that can be specified in the TAF), including non-convective low-level wind shear that occurs, or is expected to occur, during the forecast period.

A3.1.7. Altimeter Setting. The onset of altimeter settings meeting or exceeding 31.00 INS or altimeter settings 28.00 INS or less. If less than the threshold specify when altimeter settings equal or exceed the thresholds, if greater than, specify when altimeter settings will decrease to equal or less than the thresholds.

A3.1.8. Forecast Weather Advisory Criteria (issued for TAF amendable criteria), including non-convective low-level wind shear that occurs, or is expected to occur, during the forecast period.

A3.1.9. Precipitation.

A3.1.10. Thunderstorms.

A3.1.11. TAF Amendments. Forecasters will ensure the TAF is representative of expected or actual conditions. Forecasters will amend the TAF:

A3.1.11.1. Temporary Conditions:

A3.1.11.1.1. Amend if temporary conditions become predominant.

A3.1.11.1.2. Amend if temporary conditions do not occur as forecast.

A3.1.11.1.3. Amend if temporary conditions are no longer expected to occur.

A3.1.11.2. Changes to Predominant Conditions. Amend if forecast changes conditions occur before the specified period of change, do not occur, or are no longer expected to occur.

A3.1.12. Representative Conditions. Amend if forecast conditions are not considered representative of the characterized state of the atmosphere and an amendment improves safety, flight planning, operational efficiency, or assists in-flight aircraft.

A3.2. Representative Conditions. Amend if forecast conditions are not considered representative of the characterized state of the atmosphere and an amendment improves safety, flight planning, operational efficiency, or assists in-flight aircraft.

A3.2.1. When the ceiling and/or visibility is observed, or later forecast, to increase to or exceed, or decrease to less than any of the levels listed in **Table A4.1** and was not specified in the TAF.

A3.2.2. Winds:

A3.2.2.1. If the difference between the predominant wind speed (or gust) and the forecast wind speed (or gust) is 10 knots or more.

A3.2.2.2. If wind gust speed is in error by 10 knots or more.

A3.2.2.3. If prevailing wind speed is in error by more than 30 degrees AND winds are more than15 knots.

A3.2.2.4. Icing, if beginning or ending of icing meets, exceeds, or decreases to less than moderate (or greater) intensity and was improperly specified in the forecast.

A3.2.2.5. Turbulence, if the beginning or ending of turbulence meets, exceeds, or decreases to less than moderate (or greater) intensity and was improperly specified in the forecast.

A3.2.2.6. Non-convective low-level wind shear, if the non-convective low-level wind shear is occurring, expected to occur, or no longer expected to occur during the forecast period.

A3.2.2.7. Weather Warning Criteria:

A3.2.2.7.1. If weather warning criteria occurs, or is expected to occur, during the forecast period, but was not specified in the forecast.

A3.2.2.7.2. Was specified in the forecast, but is no longer occurring or expected to occur during the forecast period.

A3.2.2.8. Altimeter Setting. If the altimeter setting meets, or is expected to meet the threshold and was not specified in forecast.

A3.2.2.9. Forecast Weather Advisory Criteria. If the forecast weather advisory criteria is improperly specified, occurs and was not forecast, or is no longer expected to occur.

A3.2.2.10. Precipitation:

A3.2.2.10.1. If unforecast freezing precipitation begins or ends.

A3.2.2.10.2. If the beginning or ending of precipitation causes local weather warnings or advisories specified in the TAF to be issued, canceled, or amended.

A3.2.2.10.3. If the occurrence or nonoccurrence is considered operationally significant.

A3.2.2.11. Thunderstorms. If the start or end time of the thunderstorm is incorrectly specified.

Attachment 4

SAMPLE WEATHER PRODUCT DISSEMINATION FORMAT/INTERPRETATION OBSERVATION/TAF/WWAS

Table A4.1. Sample Weather Observations.

1	2	3	4	5	6	7	8	9	10
SPECI	KSKA	281506Z	AUTO	17013G22KT	1SM	RVR/2200FT	TSRA	BKN015	33/31
ALSTG	29.99	RMK	AO2						
11		12							

Body of Report - Consists of 11 Groups		
Group	Reference	Brief Description
Type of Report	A4.1.	Indicates type of report.
Station Identifier	A4.2.	A four-character group used to identify the observing location.
Date and Time of Report	A4.3.	Date and time of the report.
Report Modifier	A4.4.	A report modifier **(COR)** identifying report as a correction, or **AUTO** indicating the weather observation is a fully automated report with no human intervention.
Wind	A4.5.	Indicates wind direction and speed.
Visibility	A4.6.	Provides prevailing visibility from the designated point of observation in statute miles or meters.
Runway Visual Range	A4.7.	10-minute RVR or varying RVR in hundreds of feet or meters.
Present Weather	A4.8.	Any weather occurring at the observing location, obscurations to vision, or other phenomena.
Sky Condition	A4.9.	State of the sky in terms of sky cover, layers and heights, ceilings and obscurations.
Temperature and Dew Point	A4.10.	Measure of hotness/coldness of ambient air. Dew point measures saturation point temperature.
Altimeter	A4.11.	Indicates altitude above MSL of an aircraft on the ground.
Remarks	A4.12.	Remarks generally elaborate on parameters reported in the body of the report, and will be included in all METAR and SPECI observations.

A4.1. Type of Report. METAR or SPECI.

A4.2. Station identifier, also called the International Civil Aviation Organization. This code identifies the location of the observation (in this case Fairchild AFB).

A4.3. Date and Time of Report. This is in Zulu (GMT) of the last element of the observation.

A4.4. Report Modifier. The report modifier can be either of the following two elements:

A4.4.1. COR is entered into the report modifier group when a corrected METAR or SPECI is transmitted.

A4.4.2. AUTO identifies the report as a fully automated report with no human intervention.

A4.4.2.1. AUTO is automatically included in reports when the weather technician signs off the AMOS indicating the observations are no longer being augmented.

A4.4.2.2. AUTO and COR will not be seen in the same observation. If the term COR is used, the observation cannot be reported as AUTO, since a weather technician is manually correcting the observation.

A4.5. Wind. The true direction the wind is blowing from is encoded in tens of degrees using three figures. Directions less than 100 degrees are preceded with a "0." The wind speed is entered as a two or three digit group immediately following the wind direction.

A4.5.1. Gust. The wind gust is encoded in two or three digits immediately following the wind speed. The wind gust is encoded in whole knots using the units and tens digits and, if required, the hundreds digit.

A4.5.2. Variable Wind Direction (speeds 6 knots or less). Variable wind direction with wind speed 6 knots or less may be encoded as VRB in place of the direction.

A4.5.3. Variable Wind Direction (speeds greater than 6 knots). Wind direction varying 60 degrees or more with wind speed greater than 6 knots will be encoded. The variable wind direction group will immediately follow the wind group. The directional variability will be encoded in a clockwise direction. For example, if the wind is variable from 180 degrees to 240 degrees at 10 knots, it would be encoded 21010KT 180V240.

A4.5.4. Calm Wind. Calm wind is encoded as 00000KT.

A4.6. Visibility. The furthest predominant distance (at least 50% of the aerodrome) seen from the airfield reported in statute miles. The most common visibility reported is 7 miles.

A4.7. Runway Visual Range.

A4.8. Present weather. Any weather phenomenon occurring on the airfield. This is mandatory anytime the visibility is less than 7 miles. **Table A5.2** lists the present weather codes:

Table A4.2. Weather Phenomena Codes.

QUALIFIER		WEATHER PHENOMENA		
INTENSITY OR PROXIMITY 1	**DESCRIPTOR 2**	**PRECIPITATION 3**	**OBSCURATION 4**	**OTHER 5**
- Light Moderate + Heavy **VC** - In the Vicinity	**MI** shallow **PR** Partial **BC** Patches **DR** Low Drifting **BL** Blowing **SH** Shower(s) **TS** Thunderstorm **FZ** Freezing	**DZ** Drizzle **RA** Rain **SN** Snow **SG** Snow Grains **IC** Ice Crystals **PL** Ice Pellets **GR** Hail **GS** Small Hail and/or Snow Pellets	**BR** Mist **FG** Fog **FU** Smoke **VA** Volcanic Ash **DU** Widespread Dust **SA** Sand **HZ** Haze **PY** Spray	**PO** Well-Developed Dust/Sand Whirls **SQ** Squalls **FC** Funnel Cloud(s) (Tornado, or Waterspout) **SS** Sandstorm **DS** Duststorm

A4.9. Sky Condition and Cloud Height. Describes the amount of clouds present at the airfield and the base of each cloud deck. They fall into the following categories:

A4.9.1. SKC – Sky Clear.

A4.9.2. FEW – 1/8 to 2/8 coverage.

A4.9.3. SCT – Scattered; 3/8 to 4/8 coverage.

A4.9.4. BKN – Broken; 5/8 to 7/8 coverage.

A4.9.5. OVC – Overcast; 8/8 coverage.

A4.9.6. VV – Vertical visibility; normally used during heavy fog, indicates how far up into the fog can be seen.

A4.9.7. FEW000 – Surface-based obscuration.

A4.9.8. Cloud Height. Three-digit number provides the height of the base of the cloud in hundreds of feet (e.g., 015 equals 1,500 feet).

A4.10. Temperature and Dew Point (Reported in Celsius.)

A4.11. Altimeter Setting. The current value aircraft altimeters must be set at to read an elevation of zero. The altimeter is measured in inches (INS) of mercury.

A4.12. Remarks. Table A5.3. contains some of the most commonly seen remarks in observations:

Table A4.3. Remarks Listing.

AO2 - Automated sensor indicator
DSNT - Distant
ESTMD - Estimated
FROPA - Frontal Passage
LTG - Lightning
LWR - Lower
PK WND - Peak Wind
PRESFR - Pressure Falling Rapidly
PRESRR - Pressure Rapidly Rising
RWY - Runway
VIS - Visibility
WSHFT - Wind Shift
PA - Pressure Altitude
DA - Density Altitude

A4.13. TAF.

Table A4.4. Sample TAF.

KSKA 0119/0301 31005KT 9999 SCT015 SCT250 QNH3015INS
BECMG 0120/0121 12010KT 6000 SHRA SCT010 BKN025 OVC080 QNH3005INS
TEMPO 0121/0200 VRB10G20KT 0800 TSRA SCT008 BKN015CB OVC030 TX24/0120Z
TN10/0210Z

A4.13.1. The forecast follows the same general format as the observation with the following exceptions noted :

A4.13.1.1. Valid Date/Time. Forecasts are valid for a 30-hour period. In this example, the forecast is valid from the first at 1900Z until the third at 0100Z.

A4.13.1.2. BECMG – This is a code to indicate the predominant conditions will change to (or become) the conditions listed in the line of the forecast. The conditions will change during the time period follows the BECMG code (2000 to 2100Z in the example above).

A4.13.1.3. TEMPO – This code means the conditions listed on the line may occur for periods of an hour or less (1 hour and 15 minutes or less for thunderstorms) anytime between the time frame following the TEMPO code (2100Z to 0000Z in this example).

A4.13.1.4. Max Temp/Min Temp. TX24 indicates a maximum temperature in Celsius to occur at 20Z. TN10 indicates a minimum temperature of 10 Celsius to occur at 10Z (**Note:** M indicates a minus sign in front of the number: M05 = -5 C).

A4.14. Weather Warnings, Watches, and Advisories.

Table A4.5. Observed Weather Warning.

1. WWXX99 KAOS 120838

PWKSKA 120838
Weather Warning 12-007 for Fairchild AFB (KSKA) Valid 12/1000Z (12/0200L) to 12/2100Z (12/1300L)

Forecasted Heavy Snow >= 2 inches. Forecast value 2 1/2 inches. within 12 hrs.

Heavy Snow with Accumulation > 2 inches within 12 hrs. The maximum expected snow depth of 2.5 inches with heaviest snowfall rate occurring between 1000-0300Z. The duration of snowfall is expected to last 06 hrs.

2. WWXX99 KAOS 121643

PWKSKA 121643
Weather Watch 12-004 for Fairchild AFB (KSKA) Valid 12/1635Z (12/0835L) to 12/2000Z (12/1200L)

Potential for Freezing Precipitation exists.

3. WWXX99 KAOS 121623

PWKSKA 121623
Weather Advisory 12-022 for Fairchild AFB (KSKA) Valid 12/1623Z (12/0823L) UFN

Observed ** Ceiling < 200 ft and/or Visibility < 1/2 mi.

Attachment 5

FLYING UNITS SUPPORTED & MISSION LIMITING ENVIRONMENTAL CONDITIONS

Table A5.1. Flying Units Supported.

Organization	Mission	MWP Provider
92 ARW & 141 ARW (KC-135R/T)	Provides the best air mobility for America through reliable air refueling, airlift, and operational support.	618 AOC/XOW
36 RQF (UH-1N)	To support the activities of the USAF Survival School through hands-on helicopter operations; To support the National Search and Rescue Plan by providing assistance to local authorities; And to provide the Department of Defense with exceptionally qualified crewmembers.	WF
AASF 2 - Army National Guard (UH-60)	Support MDAY units with aviation assets.	WF

A5.1. Mission Limiting Thresholds.

A5.1.1. Airframe-Specific Weather Limitations. Tables A6.2 – A6.7 provide the general airframe weather limitations based on AFI 11-202V3, *General Flight Rules* and the limitations from aircraft specific AFI 11-2 and AR 95-1.

Table A5.2. USAF General Flight Rules Weather Limitations.

(Ref: AFI 11-202V3, *General Flight Rules*)		
Weather Condition	**Impact**	**Customer Action**
Cig/Vis < 2,000/3SM	Alternate required	Add fuel to allow divert
Cig/Vis < 700/2SM	Terminal not suitable for alternate	Select another alternate
Notes: 1. KC-135 aircraft may take-off and land when airfield is below published weather minimums. 2. When weather is below approach and landing minimums (Ceiling/Visibility 200FT/½SM) a departure alternate is required.		

Table A5.3. KC-135 Weather Sensitivities.

(Ref: AFI 11-2KC-135V3, C/*KC-135 Operations Procedures*)		
Condition	**Limit**	**Response Action**
Max Crosswind Component	≥ 25KTS	RCR/Gross Weight may reduce this
Max Crosswind for RCR 0 - 5	No Operations	Waiver required to taxi
Max Crosswind for RCR 6 – 8	13KTS – 20KTS	
Max Crosswind for RCR > 8	16KTS – 25KTS	
Thunderstorms	Avoid by 10NM below FL230 Avoid by 20NM above FL230	Do not fly directly above (within 2,000FT) of thunderstorms/ cumulonimbus clouds. Avoid areas of high lightning potential (clouds within + or – 5000 feet of the freezing level or + or – 8°C of the freezing level)
Turbulence	≥ Severe or ≥ Moderate Mountain Wave	Flight into areas of forecast or reported severe turbulence is prohibited. Known or forecast areas of moderate or greater Mountain Wave turbulence.
Induction Icing		Engine anti-icing must be used in ice fog or when the temperature is below 50°F (10°C) and standing water is visible on the ramp or taxiways or visible moisture is present.
Icing	> Moderate	Must avoid observed or forecast severe. Avoid any flight through freezing rain.
Volcanic Ash	Avoid volcanic activity by 20NM.	Flight through forecast or known area of volcanic activity & dust is prohibited. Obtain Volcanic Ash Advisories (VAA) from Volcanic Ash Advisory Centers (VAAC) prior to using the 2nd WS via: http://www.ssd.noaa.gov/VAAC/vaac.html or via AFW-WEBS.
RVR (Operational)	1000FT	When less than RVR 1600, but equal to or greater than RVR 1000, the crew may take off if mission priority dictates, provided the runway has dual RVR readouts and displays (minimum RVR 1000 on both) and runway centerline lighting is operational. For any takeoff below 1600 RVR, the crew must be fully qualified.

RVR (all others)	1600FT	For runways with more than one operating RVR readout, RVR must read 1600 minimum on all.
All Missions	1. Freezing Rain 2. RCR measured 4 or greater	1. Do not take-off under conditions of freezing rain. **Do not take-off under conditions of freezing drizzle except when aircraft has been properly de-iced/anti-iced IAW flight manual procedures** 2. RCR measured 4 or greater
Notes: 1. Cannot take off with > .5 inches of slush or water on the runway. 2. If no RVR readout is available for the departure runway, visibility must be reported to be ½ mile (800) meters.		

Table A5.4. KC-135 Maneuver Restrictions.

(Ref: AFI 11-2KC-135V3, C/*KC-135 Operations Procedures*)		
Maneuver	**Ceiling/Visibility Minimums**	**Other Restriction**
Air Refueling (A/R)	Visibility ≥ 1NM. (receiver dependent, some may be less)	1. Thunderstorms within 10NM. 2. Moderate or greater Turbulence
Touch-and-go landings	1. Minimum ceiling of 1,000 AGL and visibility of 2 SM for A/Cs. 2. Minimum ceiling of 300 AGL and RVR 4000 (3/4 SM visibility with direct IP supervision.	1. RCR measured 9 or greater 2. Max crosswind 15 knots (10KTS for Advisory Circulars (ACs)) 3. Not accomplished on slush-covered runways.
Low Altitude A/R		1. Less than forecast, reported, or observed moderate turbulence

Table A5.5. UH-1N Weather Sensitivities.

(Ref: AFI 11-2UH-1NV3, *UH-1N Helicopter Operations Procedures*)		
Condition	**Training Limit**	**Operational Limit**
Ceiling/Visibility	Day – Single Pilot: 700FT/2SM	Day – Single Pilot: 700FT/1SM
	Day – Dual Pilot: 500FT/2SM	Day – Dual Pilot: 500FT/1SM
		Night – Unaided: 1000FT/2SM
		Night – NVG: 500FT/2SM
	Flyovers: 2500FT/5SM	Flyovers: 2500FT/5SM

	Functional Check Flight (FCF) minimum: 700FT/2SM	Functional Check Flight (FCF) minimum: 700FT/1SM
Winds	≥ 40KTS steady state (Training/Exercise); will not be started or shutdown	≥ 45KTS; starting and stopping rotors is prohibited
Thunderstorms	Avoid by minimum 5NM	Avoid by minimum 5NM
Turbulence	Avoid areas of greater than moderate (CAT 1 aircraft)	Avoid areas of greater than moderate (CAT 1 aircraft)
Icing	Avoid icing	Avoid icing
Temperature	> 52C or < -54C operations prohibited	> 52C or < -54C operations prohibited

Table A5.6. HH-60 Weather Sensitivities.

(Ref: AR 95-1, *Aviation Flight Regulations*)	
Condition	**Limit**
Ceiling/Visibility	100FT / ¼SM
RVR	1200FT
Winds	≥ 45KTS; will not be started or shutdown (including gusts)
Thunderstorms	Will not be intentionally flown into thunderstorms.
Turbulence	Will not be intentionally flown into known or forecast extreme turbulence or into known severe turbulence.
Icing	Will not be flown into known or forecast severe icing conditions.
Alternate Airfield	Ceiling 400ft above airfield minimum Visibility 1SM above airfield minimum

Table A5.7. Jump, Airdrop, and Hoist Weather Sensitivities.

(Ref: AFI 13-217,*Drop Zone and Landing Zone Operations*)

AFI13-217 **Table 2.3. Surface Wind Limits for CDS/Equipment Airdrops.**

TYPE CDS/EQUIPMENT DROP	SURFACE WIND LIMITS (KNOTS)
USAF Equipment	17
USAF CDS or LV-LCADS using G-12 parachutes	13
USAF CDS using G-13/14 parachutes	20
HAARS, HV CDS, HSLLADS, or HV-LCADS	No Restriction
CDS/Equipment using Joint Precision Airdrop System (JPADS)	Refer to JPADS guidance system technical manuals

USAF Training Bundles (SATB)	25
RAMZ/ARC/CRRC Bundles	25 knots IAW FXC Technical Manual change 4 dated Jun 2005
Non-USAF Equipment	Discretion of supported force DZSO

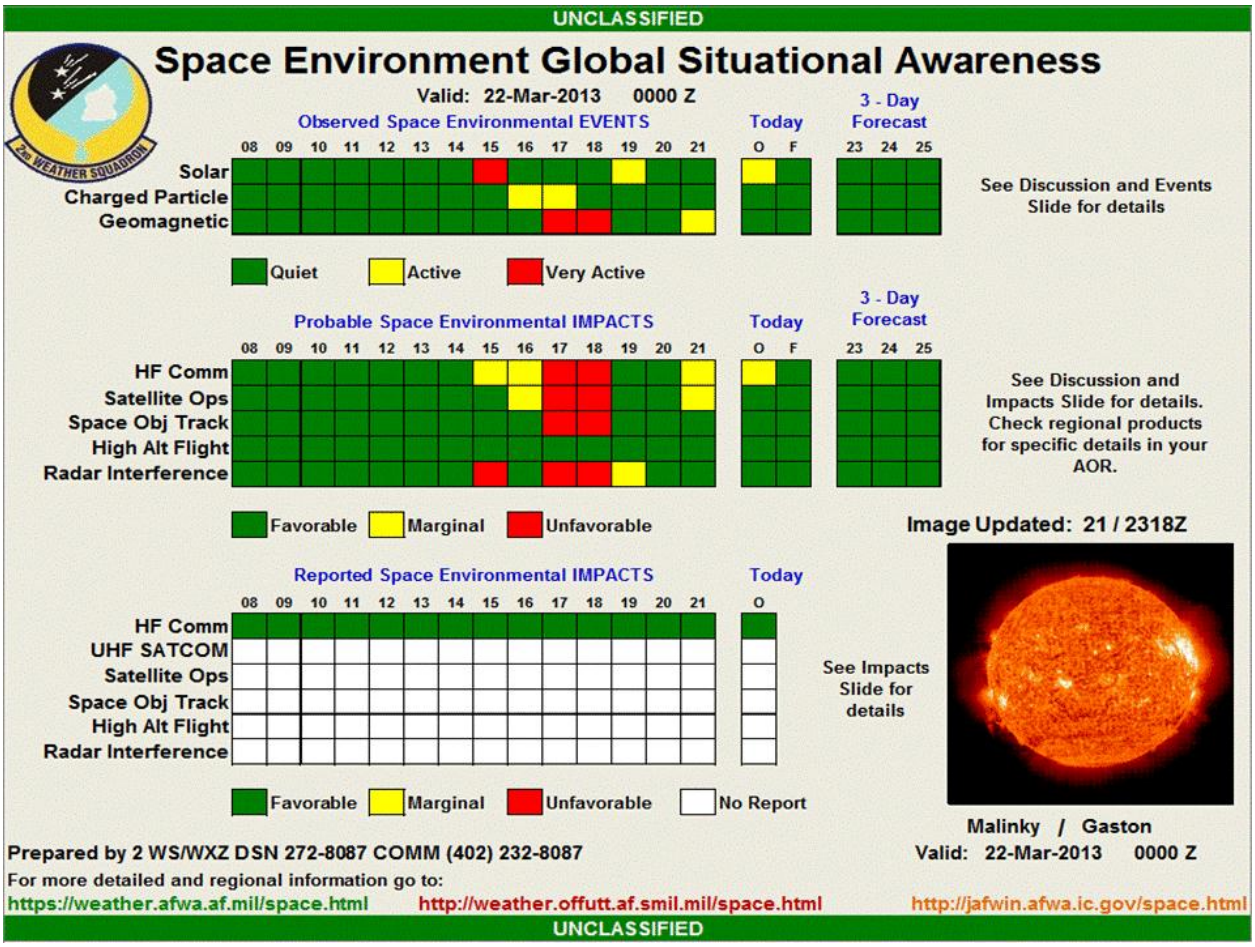
AFI 13-217 **Table 2.4. Surface Wind Limits for Personnel Airdrops.**

TYPE PERSONNEL DROP (See NOTE)	SURFACE WIND LIMITS (KNOTS)
USAF Static Line Land / Intentional Tree	13 / 17
USAF Static Line Water	25
USAF MFF Land / Intentional Tree	18 / 22
USAF MFF Water	25
USAF Tandem	18
Non-USAF Personnel	Discretion of unit DZSO
NOTE: During operational missions/contingencies, the airborne commander and/or team leader will coordinate wind restrictions with the air mission commander/aircraft commander based on operational requirements.	

Airdrops	
AF HALO/HAHO (Land & Water) MFF	Ceilings/Visibility $\geq$ 3500FT/2SM
AF Static Line (Land & Water) C-9 Chute	Ceilings/Visibility $\geq$ 2000FT/2SM
Hoist Training	
Hoist Training	Ceiling/Visibility $\geq$ 400FT/2SM

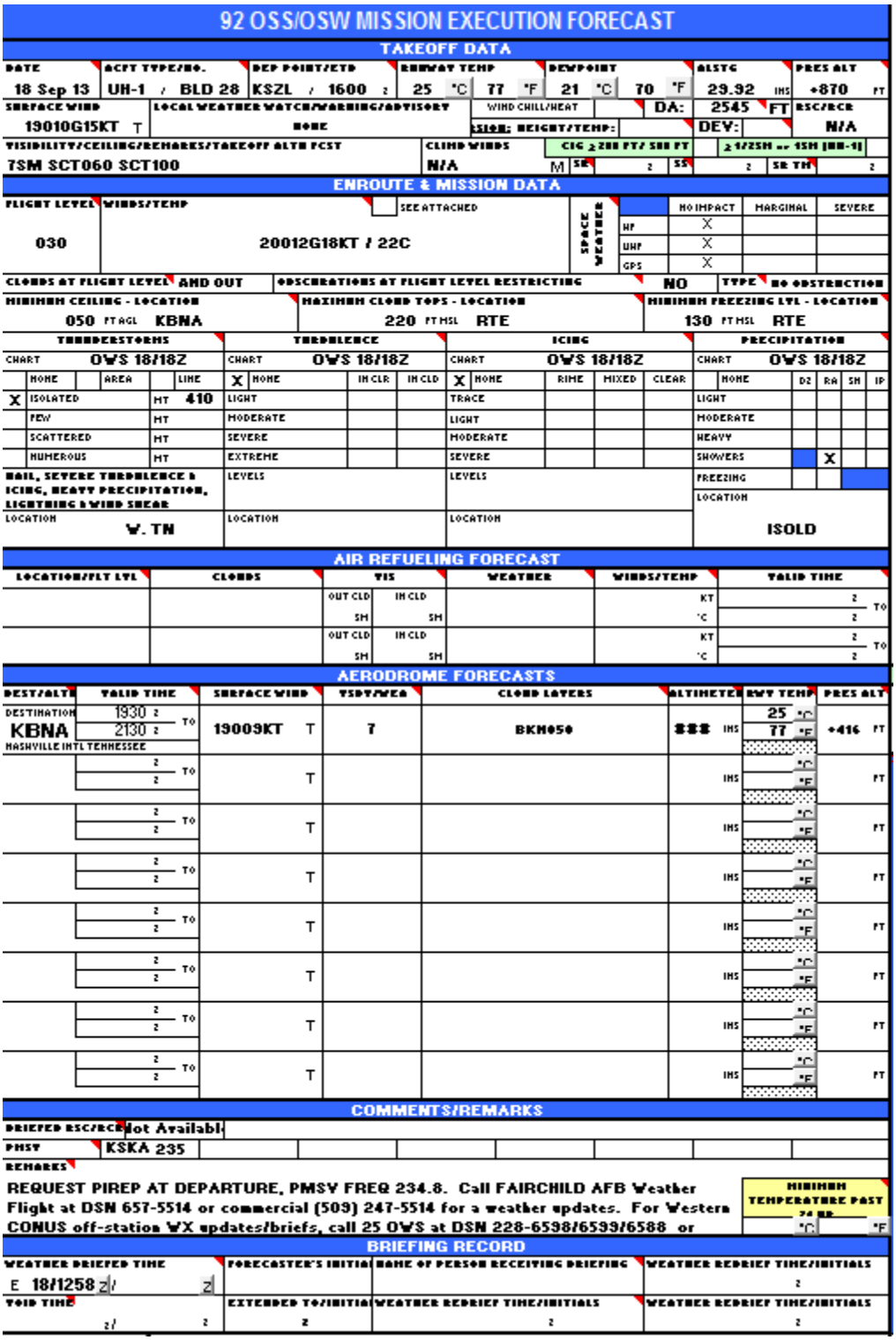
Attachment 6

SPACE WEATHER IMPACTS



Attachment 7

MISSION WEATHER PRODUCT



92 OSS/OSW MISSION EXECUTION FORECAST

TAKEOFF DATA

DATE	ACFT TYPE/NO.	DEP POINT/ETD	RUNWAY TEMP	DEWPOINT	ALSTG	PRES ALT
18 Sep 13	UH-1 / BLD 28	KSZL / 1600 Z	25 °C 77 °F	21 °C 70 °F	29.92 INS	+870 FT

SURFACE WIND	LOCAL WEATHER WATCH/WARNING/ADVISORY	WIND CHILL/HEAT	DA:	RSC/RCR
19010G15KT T	NONE	ICING: HEIGHT/TEMP:	DEV:	N/A

VISIBILITY/CEILING/REMARKS/TAKEOFF ALTN FCST	CLIMB WINDS	CIG ≥ 200 FT/ VIS ≥ 1 SM	≥ 1/2SM but < 1SM [RR-1]
7SM SCT060 SCT100	N/A M	SE Z SS Z	SE TM Z

ENROUTE & MISSION DATA

FLIGHT LEVEL	WINDS/TEMP	SEE ATTACHED	SPACE WEATHER	NO IMPACT	MARGINAL	SEVERE
030	20012G18KT / 22C		HF	X		
			UHF	X		
			GPS	X		

CLOUDS AT FLIGHT LEVEL	OBSCURATIONS AT FLIGHT LEVEL RESTRICTING		TYPE
AND OUT		NO	NO OBSTRUCTION

MINIMUM CEILING - LOCATION	MAXIMUM CLOUD TOPS - LOCATION	MINIMUM FREEZING LVL - LOCATION
050 FT AGL KBNA	220 FT MSL RTE	130 FT MSL RTE

THUNDERSTORMS — CHART OWS 18/18Z

	NONE		AREA		LINE
X	ISOLATED		HT 410		
	FEW		HT		
	SCATTERED		HT		
	NUMEROUS		HT		

TURBULENCE — CHART OWS 18/18Z

	NONE	IN CLR	IN CLD
X	LIGHT		
	MODERATE		
	SEVERE		
	EXTREME		

ICING — CHART OWS 18/18Z

	NONE	RIME	MIXED	CLEAR
X	TRACE			
	LIGHT			
	MODERATE			
	SEVERE			

PRECIPITATION — CHART OWS 18/18Z

	NONE	DZ	RA	SN	IP
	LIGHT				
	MODERATE				
	HEAVY				
	SHOWERS		X		
	FREEZING				

HAIL, SEVERE TURBULENCE & ICING, HEAVY PRECIPITATION, LIGHTNING & WIND SHEAR

LOCATION	LEVELS	LEVELS	LOCATION
W. TN			ISOLD

AIR REFUELING FORECAST

LOCATION/FLT LVL	CLOUDS	VIS OUT CLD SM	VIS IN CLD SM	WEATHER	WINDS/TEMP KT °C	VALID TIME Z TO Z

AERODROME FORECASTS

DEST/ALTN	VALID TIME Z TO Z	SURFACE WIND	TSDT/WEA	CLOUD LAYERS	ALTIMETER	RWY TEMP °C °F	PRES ALT
DESTINATION KBNA NASHVILLE INTL TENNESSEE	1930 Z TO 2130 Z	19003KT T	7	BKN050	### INS	25 °C 77 °F	+416 FT
	Z TO Z	T			INS	°C °F	FT
	Z TO Z	T			INS	°C °F	FT
	Z TO Z	T			INS	°C °F	FT
	Z TO Z	T			INS	°C °F	FT
	Z TO Z	T			INS	°C °F	FT
	Z TO Z	T			INS	°C °F	FT
	Z TO Z	T			INS	°C °F	FT

COMMENTS/REMARKS

BRIEFED RSC/RCR	Not Availabl
PMSV	KSKA 235

REMARKS

REQUEST PIREP AT DEPARTURE, PMSV FREQ 234.8. Call FAIRCHILD AFB Weather Flight at DSN 657-5514 or commercial (509) 247-5514 for a weather updates. For Western CONUS off-station WX updates/briefs, call 25 OWS at DSN 228-6598/6599/6588 or

MINIMUM TEMPERATURE PAST 24 HR °C °F

BRIEFING RECORD

WEATHER BRIEFED TIME	FORECASTER'S INITIA	NAME OF PERSON RECEIVING BRIEFING	WEATHER REBRIEF TIME/INITIALS
E 18/1258 Z			Z
TOID TIME Z	EXTENDED TO/INITIA Z	WEATHER REBRIEF TIME/INITIALS Z	WEATHER REBRIEF TIME/INITIALS Z